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Research Topic: Do Design Codes Have a Negative Impact on Innovation or Design Creativity?

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Abstract

That design codes have been given political backing and are high on the political agenda cannot be contested. Design codes also have a long history however; there is something about this latest resurgence of interest in design codes that gives the subject a new poignancy. The governmental focus is centred on speed of delivery and certainty of decision making but at what cost? As design issues become the remit of Local Planning Authorities, developers and urban designers the traditional role of the professional designer is challenged and the boundaries become blurred. A resultant nervousness has been identified in the body of contemporary research that design codes have the potential to stifle innovation and design creativity as design becomes handed over to the care of design codes. This research seeks to investigate this directly and poses the question – do design codes have a negative impact on innovation or design creativity? The research question is restricted to residential design codes in the U.K.

The research is based around a case study of the Ashford Barracks design code. The methodology is threefold, firstly a critical content analysis was undertaken to identify those mechanisms contained within the code that may foster innovation or design creativity. The next stage was to conduct semi – structured interviews with design experts involved in different aspects of the Ashford Barracks design code process. This was undertaken following the content analysis to probe the issues arising. The final stage was to review three designs of the same housing type to assess whether any of the designs displayed evidence of innovation or design creativity.

The findings were that there was a consistent result from the content analysis and the semi-structured interviews. It was found that there was potential for innovation contained within the code (in theory at least) and there was certainly no perception from any of the interviewees that design codes stifled innovation or design creativity. However, the review of the designs revealed no compelling evidence of innovation or creativity (as defined by the research terminology). This tension within the findings made drawing clear conclusions from the results problematic. Consequently it was deemed necessary to distinguish between a theoretical conclusion – that design codes have no negative impact on innovation or design creativity and a practical conclusion, that variation without surprise is the likely outcome of the Ashford Barracks design code (although innovation and design creativity are not precluded by it). In a broader sense this leads to the conclusion that standard house types and un-innovative designs cannot necessarily be resisted by design codes.

Due to the complexity of the issues surrounding design codes many interesting issues beyond the scope of this research were raised during the course of the research and these have been cited as possible topics for further investigation.

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To my Brother Gary I know you really understand what I'm going through. Thanks for just knowing what to say and for making me feel loved in a way that only family can – this one's for you but you don't have to read it!

Dedication:

To the memory of Jill Cullum – who died unexpectedly and before her time on 15th December 2004. I will miss you forever and will always cherish the memory of your quick wit and infectious laughter. I'm so sorry that my studies kept me from seeing you. You always said study never made me happy and you were right – it's a lonely business. I just hope it would have made you proud of me.

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Part One: Introduction:

1.1: A Commitment to Improving Design:

That there is a current focus on improving the design quality of new housing developments cannot be understated. There has been a wealth of government reports, documents and guidance published to encourage and promote better design.

The key document that underpins the national policy context for this focus is the Urban White Paper, *Our Towns and Cities: The future. Delivering an Urban Renaissance* (DTLR 2000). This document links together the design of housing to a range of interrelated governmental objectives. These include neighbourhood renewal, encouraging patterns of development that are sustainable and promote environmentally friendly lifestyles, maintaining public health and providing adequate affordable housing. The focus on the importance of good design in general and in particular good residential design clearly reflects the conclusions of the Urban Task Force report '*Towards an Urban Renaissance'* (1999).

PPG3 and *By Design: better Places to Live; A companion Guide to PPG3* (2000) bolster the Government's focus on design as a mechanism to delivering high quality residential developments. The pivotal aspect of *By Design* is that it encourages flair and imagination in design and in approaching how better places to live are delivered.

The way in which the Government envisage that the design aims and aspirations for new developments will be operationalised is via design codes. It is argued here that design codes will be a key tool in securing the broad threefold aims identified by John Prescott in 2003, namely to speed up decision making for planning applications, increasing design quality and facilitating community 'buy in'. John Prescott identified community coding in 2003 as central to delivering better environments:

'I'm talking about how to produce an attractive, well planned environment quickly and efficiently. I believe that urban coding – or community coding as I would prefer to call it has a lot to offer' (John Prescott 2003)

1.2: The Initial Focus of the Research:

Design codes have been selected as the topic of this research on the basis that they are relevant and timely. The specific focus will be centred on residential design codes in the UK. The key tension identified at the outset is that although one of the Government's stated aims is to raise design quality, the fact that codes are essentially a set of rules has the potential to directly conflict with the stated aims in *By Design* (2000) to foster flair and innovation. Therefore a key question is whether design codes stifle innovation and design creativity and this forms the initial focus for the research.

1.3: Terminology:

In reviewing the literature and historical developments of design codes it becomes apparent that design codes are referred to in a number of guises, most commonly design code, urban code, and urban design code. The Deputy Prime Minister, John Prescott has referred to urban coding as 'Community-coding' (Prescott, J (2003). However it is argued here that fundamentally these terms refer to one and the same thing – that is large-scale developments with design issues at a range of scales. CABE (2005) states that this *'illustrates that coding has the potential to address both urban design (the block, vista, urban structure) and architecture (building, elevation or materials).'* (CABE 2005), p15). For the purposes of this research the term design code is adopted.

1.4 Defining Design Codes:

In the broadest sense a design code could be defined simply as a *'set of rules for the design of a new development'* (CABE (2005), p15). However, for the

purposes of this research a more detailed definition is required and is as follows:

A form of site specific design guidance for urban development which is:

- Flexible but binding
- Preceded by a spatial masterplan, development framework or other urban design work.
- Illustrated through written and graphic form (adapted from Karski, A (2004) conference notes)

Part Two: Literature Review:

The literature review forms a key part of the research and serves to increase the understanding of the topic and ultimately to identify key issues from the contemporary body of research findings. The review will start with an historical analysis to understand the foundations of early coding and to place the topic in its historical context. The review will then move to contemporary research and identify the key issues and debates. This will demonstrate the authority and legitimacy of the research as well as help to justify the proposed research, the research design and the methodology (Hart (1998)).

2.1: Historical Context: The Early International Codes:

Although there has been much recent Government emphasis on the importance of design and design coding, the concept of design coding is not new. There are very early international examples of design codes in the Byzantine and Islamic cultures. Hakim (2002) cites the work of Julian of Ascalon, which was

> *' integrated in a book called the 'Eparch' during the period of Emperor Leo VI, 886-912 in Constantinople. The Eparch was the governor of that city. So Julian's treatise on construction from Palestine, was completely integrated unto the Book of the Eparch by approximately 900A.D'* (Hakim (2002) p3).

This work is both early and influential and had the ability to transcend cultural divides. Hakim (2002) also argues that the work of both Julian of Ascalon and Ibn al-Imam (who wrote a treatise concerning design and construction matters in Tudela, Spain) shared common goals with the origins of their thinking, and both demonstrate attitudes towards the built environment firmly rooted in ancient near east notions of *'equitable equilibrium'* (Hakim (2002), p17).

At a basic level equitable equilibrium could be defined as dealing with change in the built environment by ensuring the minimum damage occurs to pre-existing structures through stipulating fairness in the distribution of rights and

responsibilities among various parties – with particular attention being paid to those parties that are next to each other.

> '*You cannot have certain parties in the built environment having more privileges or rights than others. Everybody has to be treated equally. The purpose of these codes is to ensure that this is maintained through time and through the process of change and growth – especially among proximate neighbours'* (Hakim, (2002), p17).

Whilst at first glance this may not appear particularly pivotal – there are a number of central points in these basic assumptions that underpin the codes of Julian of Ascalon and Ibn al-Iman against which modern notions of the built environment have been forged.

1. Change in the built environment is (or should be) accepted as natural and healthy.

2. Change has the potential to cause conflict – particularly among proximate neighbours and so therefore should be managed

3. In principle property owners have the freedom to do what they please with their own property – whilst also respecting the proximate neighbours rights

4. The public realm must not be subjected to damages which result from activities originating in the private realm

There are also examples of design codes in the Roman Empire. Although not explicitly referred to as a design code the '*Ten Books of Architecture*' by Vituvius deals with issues such as the '*layout of cities, and public and private spaces and the use of materials*' (CABE, 2005, P22).

Whilst these early international examples of coding are critical to grasp a sense of the historical foundations of coding and to place the development of

early codes in historical perspective, they do little to inform the current UK experience as they bear little contemporary temporal or spatial relevance.

2.2: The British Historical Experience:

The origins of formal design coding in England can be traced to The Act for the Rebuilding of the City of London (1667) following the Great Fire of 1666. The Act as well as '*establishing a typology of streets and building heights….. also prescribed building materials, ceiling heights, wall thicknesses and structural requirements, which became the system of building control that regulated the great expansions of the following centuries'* (Hebberd (1998) cited in CABE (2005), p23). Gardiner (2004) also cites the Georgian developments of London, Bath, Brighton and Edinburgh as coded developments as the street patterns and in some cases (Edinburgh) building heights, roofline and the roof pitches were regulated.

Clearly all the ancient international codes and historical British codes cited here bear the hallmarks of those central elements that would be recognised in a contemporary design code. They would also largely conform to the definition of design codes given in section 1.3. On the basis of this it could be argued that coding has long been in our mentality and has underpinned the formation of our views and our contemporary appreciation of urban spaces.

There are more recent examples of design coded developments - Poundbury is an oft-cited and perhaps the most familiar example of a modern design coded development loved and reviled alike. The Office of the Deputy Prime Minister (ODPM) has announced 'case study' developments including Ashford Barracks, the Swindon Southern Development and Upton in Northamptonshire. These are all pilot projects and will be studied as they develop – indeed the CABE research (2005) utilises some of these case studies and has reported initial findings. Clearly design codes have arrived in the UK – but the influence even for this latest resurgence in interest can be traced overseas – namely to the U.S and in particular to the work of the New Urbanists.

2.3 The Influence of the New Urbanists:

The work of the new urbanists has been pivotal in the U.S in creating renowned design coded developments such as Seaside, Florida. Building on the U.S experience, coding in the U.K is seen by the Government as a tool which can '*produce the regularity of a London Square or the variety of Seaside'* (Speech given by Prescott, J (2003)). The new urbanists have also been fundamental in adopting a consensus building approach to design coding *'you (new urbanists) pursue a truly integrated approach, bringing together architects, artists and planners'* (Speech given by Prescott, J (2003)). The previously cited early historical examples were written by built environment professionals of their day with no consultation, the principle of these early codes was that trained professionals could dictate what should be included in a code and what should shape the urban environment. The new urbanist approach that has been highly influential here is that a code is the result of consensus building which then operationalises intentions. The code is seen as a means to improve certainty, remove barriers to development and result in faster decision making and development. Despite their success with high profile developments such as Seaside, the New Urbanists are not without critics. One of the main criticisms is that '*New Urbanism is often accused of being nostalgic*' (Gastill, R Cited in Dutton, J.A (2000), p9). This leads to the notion that '*new urbanism is an inherently conservative movement'* (Dutton, J.A (2000), p11). However, Gastill argues that whilst:

> *'in the marketing approach of much reported places such as Celebration, Florida, there is an explicit invocation of the good old days Dutton shows in his explanation of codes, guidelines and typology, many new developments, even those marketed as 'new urbanist' do not in fact demand forms driven by historic precedent'* (Gastill cited in Dutton, JA (2000) p9).

Consequently, it is not a prerequisite that the forms are traditional and the criticisms of the new urbanist movement regarding stylistic form is missing the point of urban design as Carmona argues - '*the important and – in the*

headlong rush to focus on aesthetics – too often overlooked distinction between architecture and urban design' (Carmona, M (2000), p13). Consequently these criticisms do not undermine the new urbanists influence in the sphere of coding and in particular the consensus building approach and the focus on 'building community'.

Whilst the U.S and the new urbanist experience are relevant it is critical to recognise that the planning dimension in the U.S is very different with a far more regularised system than that in the UK. Consequently this enables codes to be embedded into the regulatory system and to become mandatory. Partly the challenge to the UK experience is how to implement codes within a highly discretionary planning system which Tewdwr-Jones Refers to as *'the Planning Polity'* (Tewdwr Jones (2002), p47).

2.4: An Urban Renaissance?

Design coding has been given a renewed impetus and is high on the current political agenda. Documents such as *'Towards an Urban Renaissance'* (1999) and the *'Urban Design Compendium'* (2000) crystallised the relationship between the urban design and the planning profession. Indeed much of the language surrounding this renewed interest is significant and is worthy of examination and probing. The term 'renaissance' as used in the title of the 1999 document produced by the Urban Task Force is defined thus:

> 'A *revival or rebirth, esp of culture and learning'* (Collins English Dictionary (1991), p844)

Consequently it is implicit in these documents that a re-awakening of a lost skill and a revival of design learning is as important as the design codes themselves. The Deputy Prime Minister, John Prescott, explicitly articulates this implied notion thus:

> *'Centuries ago we knew how to achieve the best in Urban Design, from Roman Chester to Georgian Bath, but today its almost as if we are*

having to learn how to build communities again' (Prescott, J cited in CABE (2005), p5).

Other commentators reinforce this sense of a 'lost knowledge' and failings in the current architectural curricula as key to the need for design codes. Andres Duany an eminent 'New Urbanist' is perhaps one of the most scathing critics of current architectural schooling.

> 'We *code because codes can compensate for deficient professional training. We will continue to code, so long as the schools continue to educate architects towards self-expression rather than towards context, to theory rather than practice, towards the individual building than to urbanism'* (Duany, A (2004) – Conference notes)

2.5: Coding: The Contemporary Issues (From the Existing Research):

This latest resurgence of interest in the art of codification Hall & Doe (2000) define as a two-fold academic and practitioner interest. In the 1980's this was characterised by an interest in urban design issues in terms of design, aesthetics, providing greater security and a higher quality of life. This debate widened in the 1990's as issues of sustainability and the impact the layout and three-dimensional form of the city could have on energy conservation, bio-diversity and the whole spectrum of sustainability issues.

This is clearly an embracing of urban design issues in their broadest context. It could also be argued that it goes some way to addressing the common '*misconception that urban design is solely concerned with questions of building appearance'* (Webster, B 2000), p38). Design coding clearly moves beyond a preoccupation with aesthetics and addresses the fundamentals of street layout, form, grain, materials and design in its broadest sense.

2.6: An Underlying Nervousness?:

Despite the positive approach to design coding and the government's recent political backing, there is a deep sense of underlying unease throughout the built environment profession about the limiting potential of design codes. The 2005 research by CABE identifies this unease thus:

> '*There is nervousness that design coding will bring a level of prescription that will stifle design creativity'* (CABE (2005), p27).

It is argued here that this is much more than a 'nervousness' that design creativity and innovation will be stifled and that this is a view that is held widely throughout the built environment profession:

'For many an architect, coding is an infringement of their right to give form to buildings and places, while definitely stultifying innovation in design' (Hayward, R & McGlynn S (eds) (2004), p 47).

This is a strong reaction to the potential limiting effects of design coding – although this statement was made without any evidence to demonstrate how this would occur.

This view is echoed with direct reference to the code for the new concert hall in Bath where an architect laments the prescription of materials as feeling:

> '*sentenced forever to a Portland stone straight jacket of worn out pseudo-modernistic clichés'* (Larkham, P.J (2004), P10).

It seems that there is an overarching consensus that there are gaps in the current architectural schooling, which focuses on individual expression and the individual building. This focus on individual expression has the power to undermine the unity of places and create disjointed environments. Paradoxically there is a fierce defence of the designers and architects 'right' to

self expression which is deemed to be constrained – or at least potentially constrained by design codes.

This view seems to be confirmed by the RIBA president George Ferguson. Speaking at a conference at the Princes' Foundation in June 2004 Ferguson clearly identified the '*challenge and the agony'* of design coding as fundamentally that of not setting codes too rigidly as to

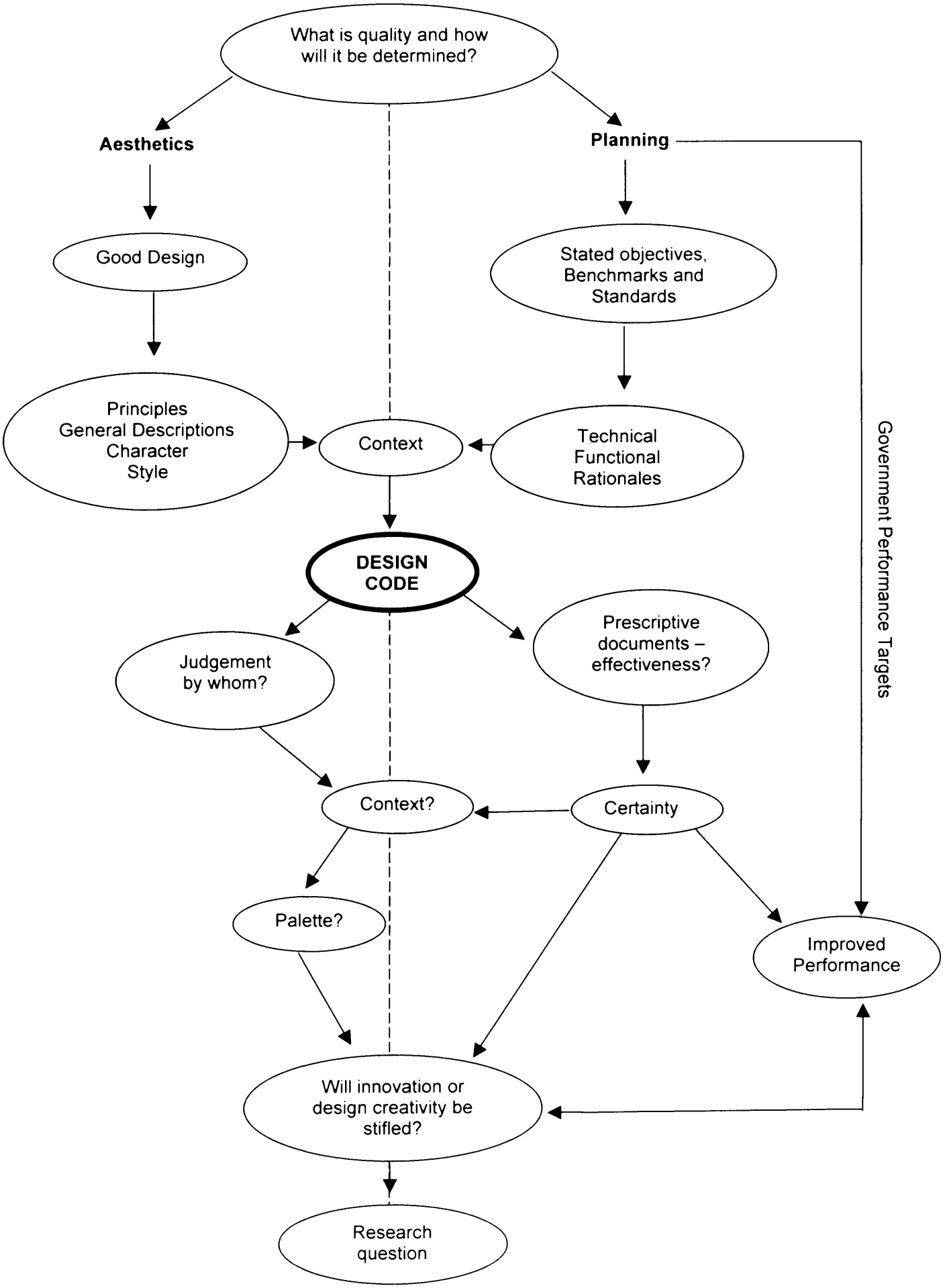
> '*reduce the possibility for surprise and excitement'* (Ferguson, G (2004) Conference notes).

This statement is key to this research and the terms surprise and excitement will be examined in detail and then clearly defined. These terms will then form the basis for investigation by asking 'experts' involved in design coding whether that particular code allows for surprise and excitement. A design code will also be analysed to see which (if any) mechanisms exist to allow flexibility and the possibility for surprise and excitement.

2.7: Justification of the Research Topic:

In the light of the two competing arguments there are two potential outcomes from design codes. Those in favour of coding would argue that restraint will foster innovation and will not stifle design creativity in any way. Others see a real danger that monotony and boredom will creep into new developments as the professional freedom and design innovation is stifled by the codes themselves. This tension has been identified by some of the latest research and was directly articulated in the introduction to CABE's research *'Do they stifle creativity?'* (CABE 2005, p6) but this issue has not yet been fully explored. On the basis that it is timely and relevant and has been identified as a relevant theme by a key piece of recent CABE research it is considered a justified topic for investigation and will add to the body of knowledge in respect of design coding. Figure 1 illustrates the conceptual framework leading to the definition of the research question.

Figure1: Conceptual Diagram of the Relationship Between Planning, Aesthetics and Design Coding.



Part Three: The Research Question and Methodology:

From the literature review an issue concerning whether design codes will stifle innovation and design creativity has been identified. This will be researched with the following hypothesis to be tested:

3.1: Hypothesis:

Design codes have no negative impact on innovation or design creativity.

3.2: The Use of a Case Study:

Haralambos (2004) argues that a case study is '*the detailed examination of a single example of something. Thus a case study could involve the study of a single institution, community or social group'* (Haralambos, M (2004), p726). In this instance due to the specific nature of design codes themselves, a large-scale survey would be inappropriate and would potentially overlook localised explanations for particular outcomes. Whilst it is accepted that it is difficult to generalise from case study based research due to its specific nature, it is still considered a valid research method as it will provide findings with regard to a specific design code. In addition with the case study approach there is no limitation to the research methods used and so this study will utilise critical content analysis of a design code, semi structured interviews with design 'experts' and a threefold review of housing designs produced to conform with the code. The threefold analysis of the housing designs include the designs contained within the code itself, designs produced at a workshop in August 2004 by Llwelyn Davies to test the code and those preliminary designs put forward on behalf of the developer that are deemed to conform with the code. This analysis of the extant housing designs will assess whether there is any evidence of innovation or design creativity. This use of varied research methods will also enable triangulation of the results to ensure that robust and reliable conclusions can be drawn – which would not be the case if semi-structured interviews were used in isolation (see Haralambos (2004), p726).

3.3: Justification of Ashford Barracks as the Case Study

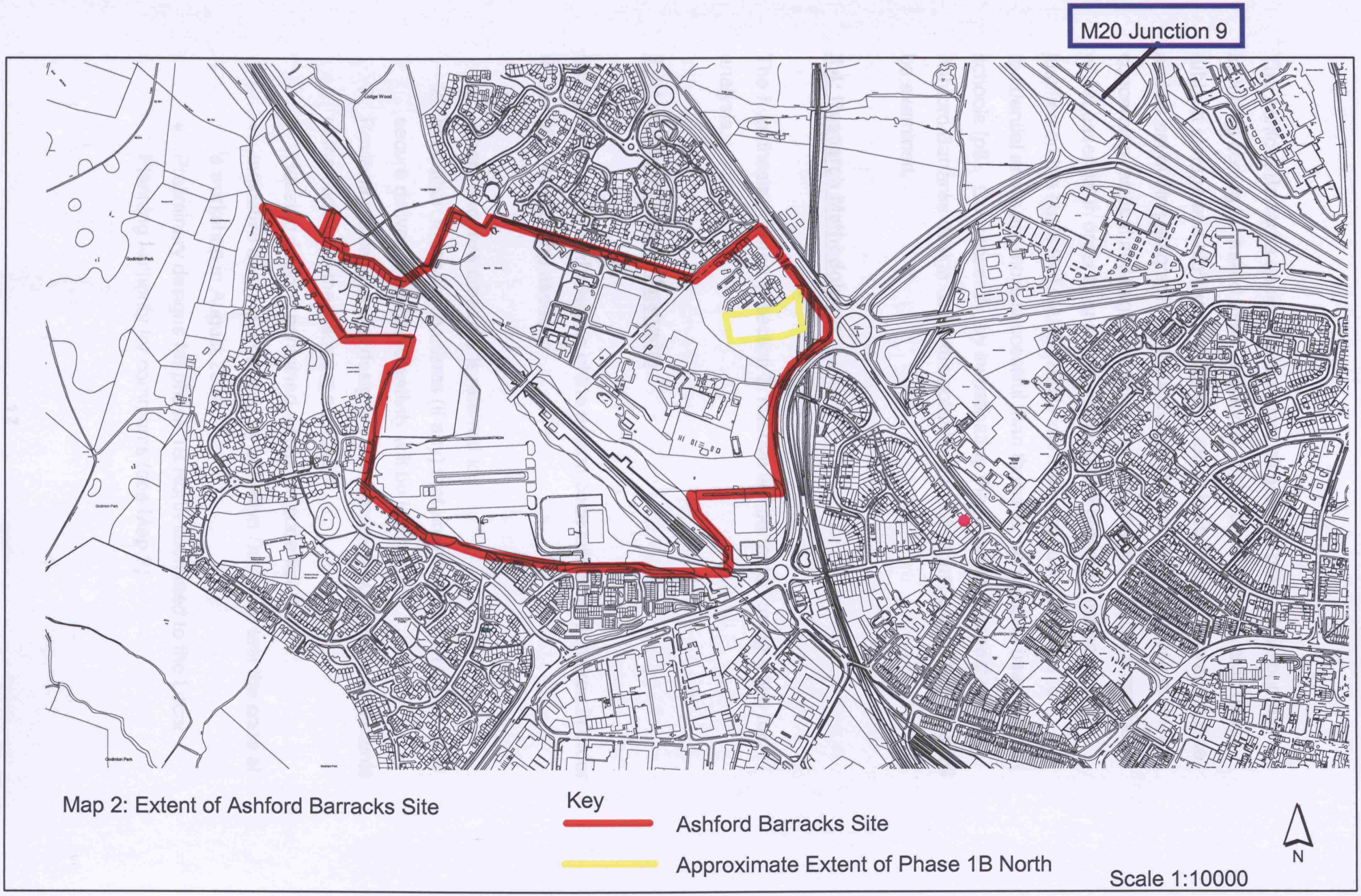
The case study for the research will be the Ashford Barracks design code. This has been chosen on the basis that the design code explicitly seeks to improve the quality and speed of delivery of housing (CABE 2005, p49). In addition the design code aims to increase certainty for both the Local Planning Authority and the Developer (EDAW (2004), P4). The commitment to a design code follows on from the completion of the first phase of building and identification of the issue of speed of delivery as a major problem. This site is therefore, a sound case study to assess whether innovation and design creativity will be sacrificed in favour of speed of delivery and certainty for the Local Planning Authority and the Developer (see Figure 1). In addition to this justification Ashford is one of the joint ODPM and CABE 'Pilot Project' initiatives and is significant at the strategic level via its designation as a potential growth pole in RPG9 (Regional Planning Guidance for the South East). Consequently the Ashford experience is central to future strategic planning and epitomises the key conflict between housing delivery and design innovation highlighted as key issues at the outset. See Maps 1& 2 for the geographical location of Ashford and the Barracks Site.

The Ashford Barracks design code is nearing finalisation and although not formally adopted it is in its anticipated final form (issue dated 18 October 2004). The phases of the development subject to the code are not currently under construction and so it will not be possible to review the physical built outcomes of the code. It will however, be possible to review the designs and illustrations contained within the code. In addition to this permission has been given by Llewelyn Davies (See Appendix 1) to include designs produced at a workshop that took place in August 2004 to test the code. Finally, the Local Planning Authority has received preliminary drawings for the first phase of development subject to the code. Although these drawings do not currently constitute a formal planning application permission has been given by Barton Willmore (See Appendix 2) to reproduce these images and it is still appropriate to review these drawings for any evidence of innovation or design creativity, as they have been produced in order to comply with the code.

Map 1: Geographical Location of Ashford

Not to Scale

Source: http://www.multimap.com/map/routein.cgi?POINT1.PASSTHRU-



Map 2: Extent of Ashford Barracks Site

The Ashford Barracks design code covers all aspects of the development including coding for mixed uses, entrances to the development, civic uses, rubbish storage and highways aspects. Due to limitations of time and space and as set out in paragraph 1.1 the focus will be narrowed to those elements concerning residential designs contained within the code. This narrow focus whilst essential in order to ensure a manageable research project is also justified on the basis that CABE (2004) identified that design codes for residential areas are more successful than those for community uses such as schools (p8). Consequently, by investigating the residential aspect of the Ashford Barracks design code, the potentially most robust part of the code will be examined.

3.4: Research Methodology:

The hypothesis outlined in section 3.1 above will be tested using a two-fold analysis.

3.4.1: Critical Content Analysis:

Firstly a critical content analysis of the design code will be undertaken in order to identify the following aspects:

1. Where and how creativity is referred to.
2. In addition those mechanisms (if any) that are embodied in the code to secure delivery variation/creativity will be identified.
3. Reviewing those houses designed in accordance with the requirements of the code from the following sources:
    - Housing designs contained within the code itself
    - Indicative designs produced by Llewelyn Davies to test the code at a workshop in August 2004
    - Preliminary designs for phase 1B North submitted to the Local Planning Authority for comments (see Map 2)

This will provide a clear understanding of the Ashford Barracks Design Code (already identified and justified as the chosen case study) and will identify those mechanisms (if any) intended to foster innovation and design creativity. The review of those buildings proposed (point 3) will reveal whether there is any evidence of innovation or design creativity.

3.4.2: Semi Structured Interviews:

The second stage of the research will be focussed around exploring the issues identified under the content analysis with a range of experts involved in preparing the Ashford Barracks Design Code. Defining a set of terms to be investigated and conducting a series of semi-structured interviews will achieve this. Three interviewees have been selected; one is a Senior Urban Designer employed by the Local Planning Authority who was involved in the formulation of the Barracks design code from the outset. One is a senior Planning Officer employed by the Local Planning Authority who was involved with the first uncoded phase of the Barracks site and was involved with the subsequent design coding process. The last interviewee is an architect employed in the private sector who is currently involved in submitted designs on behalf of the developer that comply with the requirements of the design code. As each interviewee has a particular expertise in design and also a specific experience of design codes, it is considered that their views and particular perspectives with regard to the terms under investigation will be useful in establishing a broad understanding.

Given that the views sought are both specific and specialised, a semi-structured interview is considered the most suitable qualitative research method. This approach is justifiable on two counts. Firstly, on the basis that Kendal (1946) identified semi-structured interviews as particularly appropriate '*when respondents are known to have been involved in a particular experience*' (Kendal cited in Naoum, S.G (1998), p57). The chosen respondents have all been involved in the formulation of the Ashford Barracks Design Code and so form a '*homogenous group where personal interviews are suitable*' (Naoum, S.G (1998), p57). Secondly, the research here is

focussed with finding out as much as possible about the issues concerning design innovation and creativity with regard to a specific design code (Ashford Barracks) therefore, it is critical that the interviewer is able to pursue those issues identified by the respondent. The research requires explanation as to why the respondents answer as they do and so a questionnaire with closed responses only would be too limited in scope to enable attitudes, opinions and perceptions to be gauged.

The interviewees are from both the public and private sector and have a design background including urban design, architecture and planning. All interviewees have been either involved in the formulation of the Ashford Barracks design code or in interpreting the code and producing housing designs. Anonymity will be provided to those people interviewed, although it will be possible to specify whether those views expressed are from the public or private sector and what specialist professional background the person has who expressed those views.

It is considered that a quantitative content analysis of the design code, a review of the housing designs produced to comply with the code together with the qualitative attitudinal probing of the respondents will constitute an informed, robust and informative research paper. From this analysis particular conclusions can be drawn in respect of innovation and design creativity with regard to the Ashford Barracks design code. It is anticipated that in addition to the specific conclusions regarding the Ashford case study, general observations and conclusions can be drawn with regard to design codes and their potentially limiting effects on the design process.

3.5: Defining the Research Terminology:

The statement by George Ferguson (cited in paragraph 2.6 above) that design codes should still allow for 'surprise and excitement' forms the basis for this investigation. It is argued here that this statement articulates the spirit of design innovation and creativity, the subject of this investigation. This

comment is clearly using surprise and excitement as positive terms and as necessary elements in, and reactions to, the built environment – but a clear definition is needed in order that a design code can be analysed to identify whether the code allows for these aspects and in order that experts in the field can be interviewed with clarity to the terms being used.

The word surprise is defined in the Collins English Dictionary thus:

> *'To cause or to feel amazement or wonder. To encounter or discover unexpectedly or suddenly. To astonish or amaze.'* (McLeod, W.T (ed) (1991), p1011).

This definition seems in line with the meaning intended by Ferguson - as a positive aspect and it is this definition used in a positive context that is adopted for the purposes of this research. However, the dictionary goes on to include a further definition– *'to provoke to unintended action by a trick.'* (McLeod, W.T (ed) 1991), p1011). This hints at the idea of folly and practical joking or at least doing something for attentions sake. If this definition of surprise were to be applied as a potential outcome of design codes, then this could be a very negative outcome and result in 'pastiche'. Further probing of the meanings of word surprise by use of a thesaurus reveals both negative and positive connotations of the term (see Figure 2).

The term 'excitement' presents similar problems of definition in that there are again both positive and negative connotations of the word. It is defined in the Collins English Dictionary thus:

> *'To arouse (a person) esp to pleasurable anticipation or nervous agitation'* (McLeod, W.T (1991), p345).

The thesaurus reveals that on balance the term excitement is rather more obviously positive than the surprise with only 7 out of the 29 synonyms having negative connotations – mainly relating to nervousness or apprehension (see Figure 2). It is consequently argued here that the word excitement has clearly

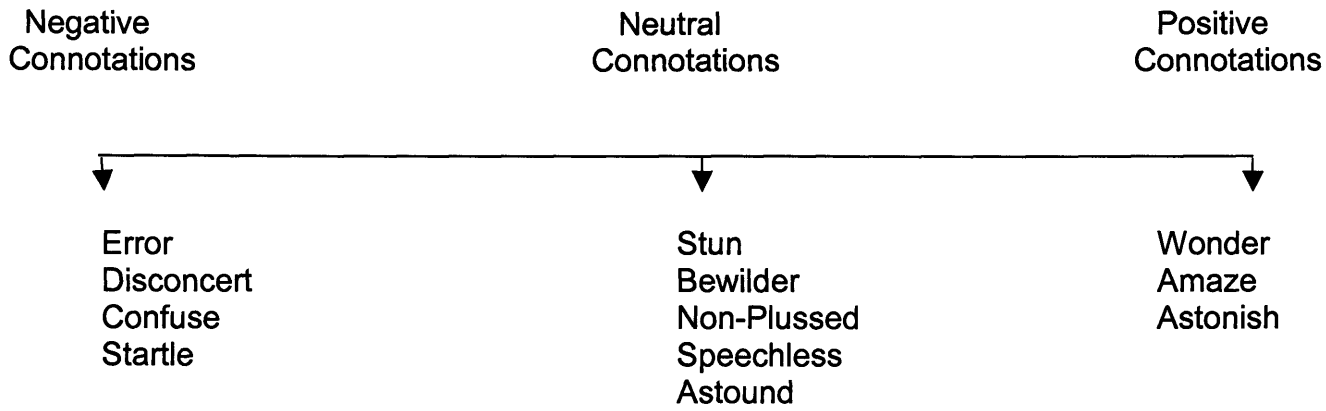
positive connotations and for the purposes of this research is defined as above and used in a positive context. This is also useful in that it allows us to confirm that the term surprise in Ferguson's statement is arguably used in a positive context.

The 'scales' set out in Figure 2 will be presented to interviewee's to ascertain to what extent they perceive the elements of 'surprise' and 'excitement' as positive or negative. This will then form the basis of the discussion as to whether surprise and excitement are appropriate and if so to what extent, and by what mechanisms within the code can this be achieved. From this information conclusions can then be drawn as to whether the Ashford Barracks Design Code has a negative impact on innovation and design creativity.

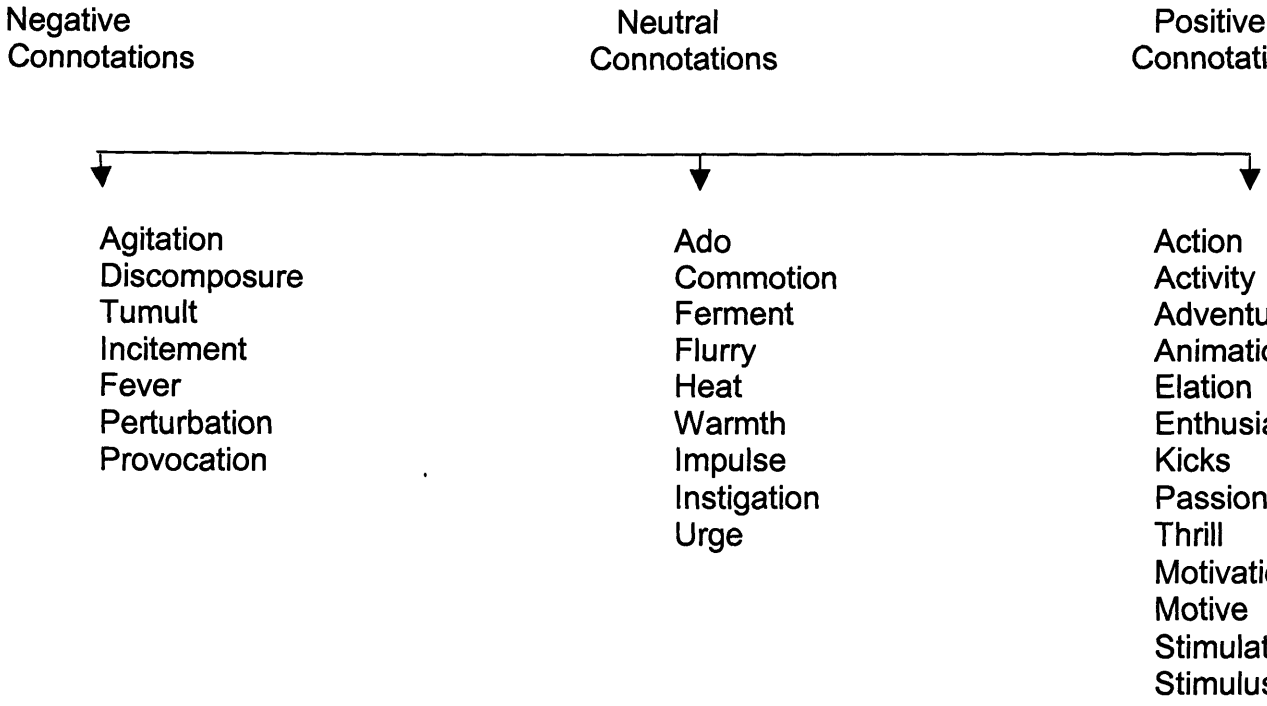
The key aspect here is that the element of surprise encompasses the 'unexpected' – which it is argued here is caused by unexpected variance in the design of houses. This will be linked to the critical analysis of the design code to identify the degree of variance permitted or encouraged on aspects such as building heights, materials, orientation, etc to establish whether or not the code is likely to foster building designs that could cause surprise and excitement.

Figure 2: Positive and Negative Connotations of the Words 'Surprise' and 'Excitement 'Taken From Thesaurus Definitions.

Surprise



Excitement


Negative Connotations
Neutral Connotations
Positive Connotations
Agitation
Discomposure
Tumult
Incitement
Fever
Perturbation
Provocation
Ado
Commotion
Ferment
Flurry
Heat
Warmth
Impulse
Instigation
Urge
Action
Activity
Adventure
Animation
Elation
Enthusiasm
Kicks
Passion
Thrill
Motivation
Motive
Stimulation
Stimulus

Part Four Findings:

4.0: Content Analysis

4.1: A Broad Overview

In reviewing the Ashford Barracks Design Code the first aspect that is immediately apparent is that the site is zoned into distinct character areas, three of which are residential neighbourhoods (Figure 4). These three residential neighbourhood types are Urban Neighbourhoods (3 sites), Village Neighbourhoods (2 sites) and Village Edge Neighbourhoods (1 site) (EDAW (2004), p12). These individual neighbourhoods are described as '*distinctive places, yet within a local area of consistent overall character*' (EDAW (2004), p7). This clearly sets the context for the design codes approach to variation in that there will be a coherent overall character within which distinct neighbourhoods will respond individually to factors such as the topography of the site, housing density, mixed uses, community uses and so forth giving each neighbourhood a distinct character.

4.2: The Road Hierarchy:

The primary mechanism for achieving this is through a hierarchy of roads, which will have distinct characteristics and housing design requirements. The same road types are present (albeit with various permutations see Table 1) within these three distinct residential neighbourhoods – see Figures 4 & 5. This is identified as a weakness within the code and could result in house types being repeated throughout the development, which arguably could limit the possibilities for innovation and design creativity. In a worst-case scenario it could even lead to there being little differentiation between the neighbourhoods which should be distinct from each other. The most obvious observation to make is that there are 7 road types namely:

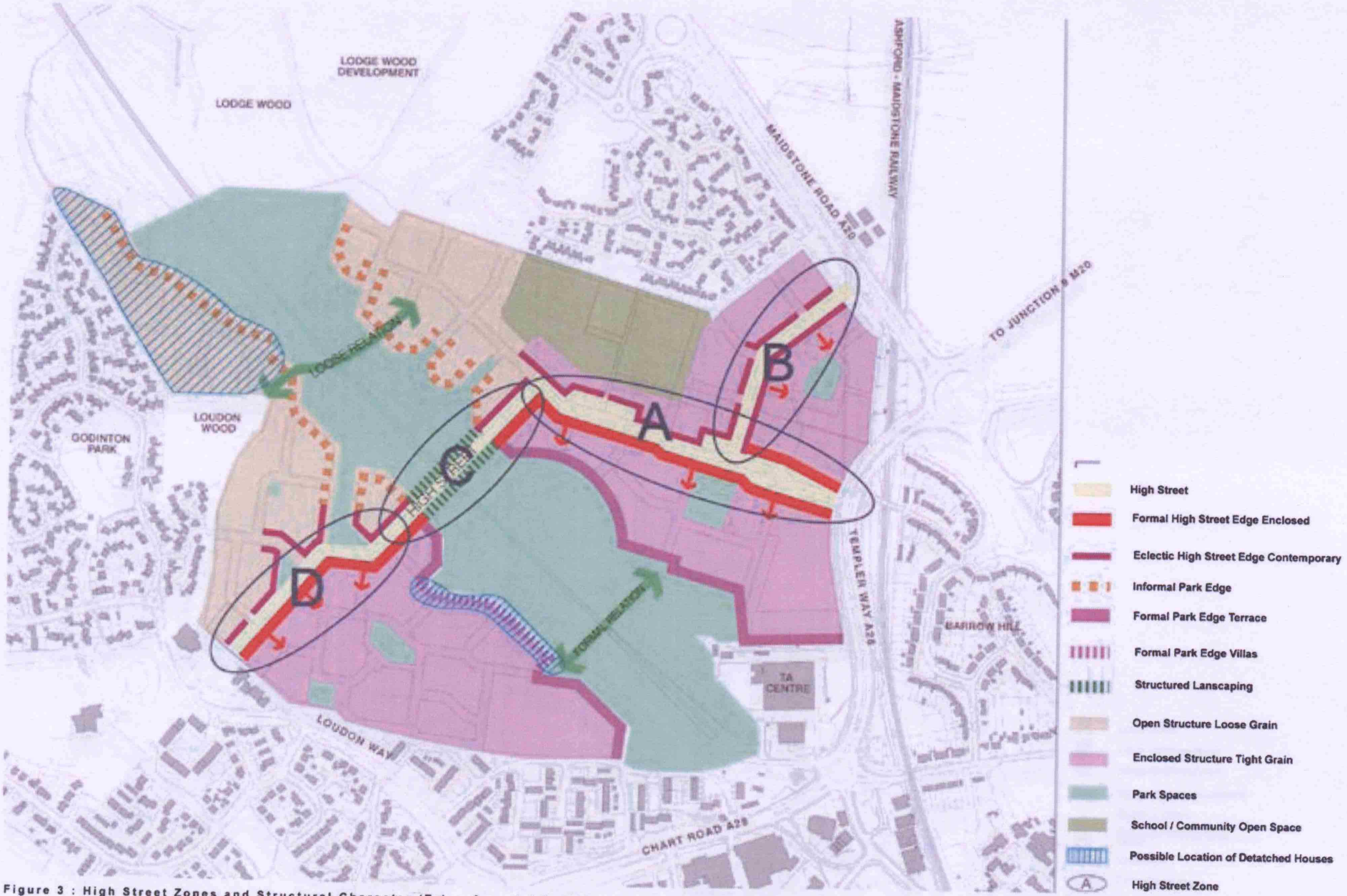


Figure 3 : High Street Zones and Structural Character (Taken from Ashford Barracks Design Code)

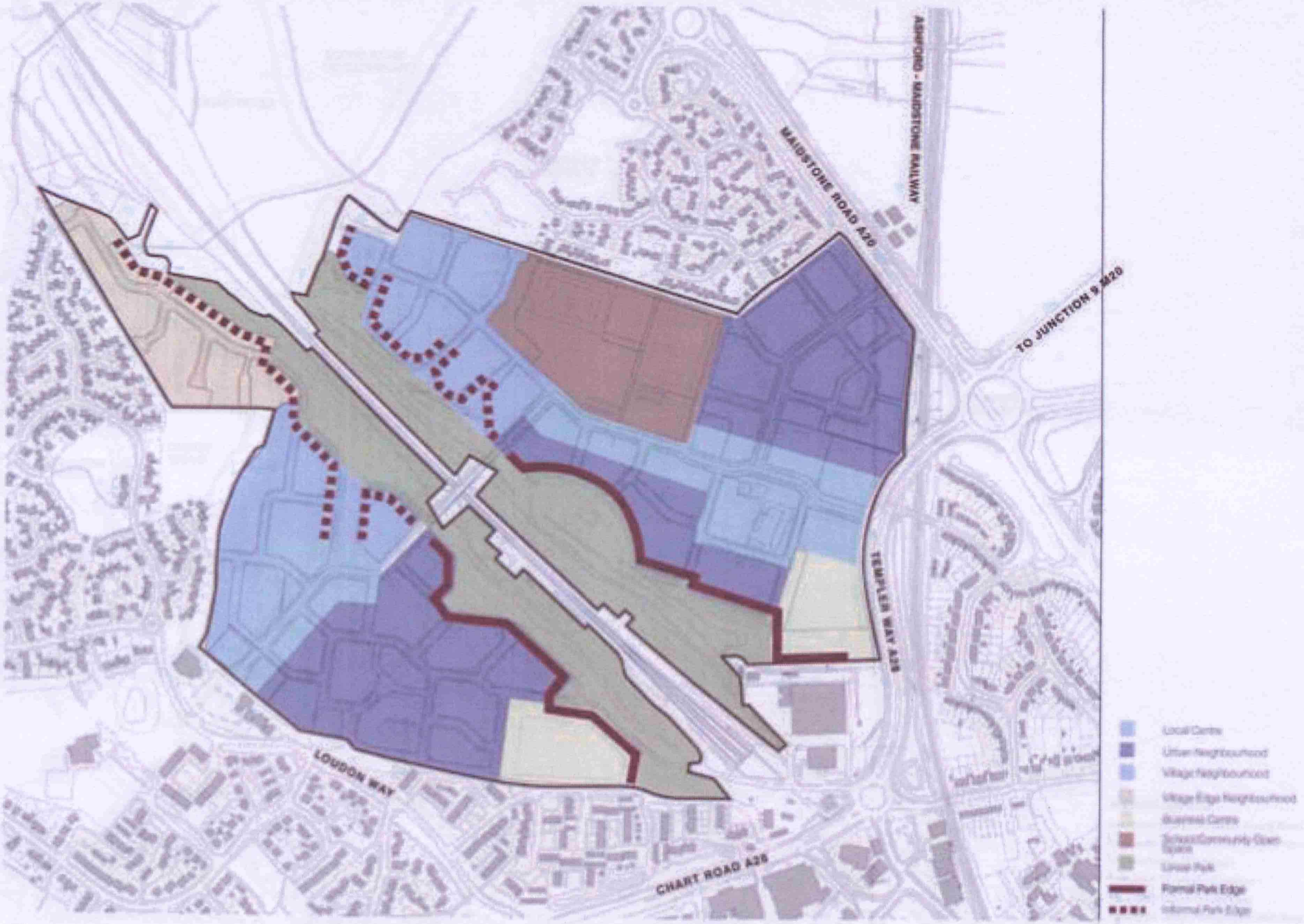


Figure 4 : Character Areas (Taken from Ashford Barracks Design Code)

Figure 5 : Street Hierarchy (Taken from Ashford Barracks Design Code)

Table 1: Character Areas and Road Types

Residential Character Area	Road Type						
	High Street	Park Frontage Street	Residential Urban Formal Street	Residential Urban Informal Street	Mews/ Courtyard	Village Country Lane	Village Formal Residential Street
Urban Neighbourhoods:							
Northern:	•		•	•	•		
Central:		•	•	•	•		
Southern:	•	•	•	•	•		
Village Neighbourhoods:							
Northern:		•			•		•
Southern:	•	•			•		•
Village Edge Neighbourhood:							
One site only - West		•				•	

- High Street Zone (further divided into 4 sub zones)
- Urban Formal Residential Street
- Urban Informal Residential Street
- Village Formal Streets
- Village Country Lanes
- Park Frontage Streets
- Mews/Courtyard

Table 1 illustrates the relationship between the road types and each of the residential character areas. It can be seen that the Urban Neighbourhoods have three common road types namely mews/courtyards, residential formal and residential informal streets. All Urban Neighbourhoods have at least 4 road types with the southern Urban Neighbourhood displaying the widest range of road types with 5 in evidence. Both Village Neighbourhoods have park street frontage, mews/courtyard and village formal streets. In addition, both have at least 3 different road types and the southern Village Neighbourhood has 4 road types contained within it. The Village Edge Neighbourhood has only 2 road types namely village country lanes and park street frontage. The village Edge Neighbourhood is the only character area which has a unique road type as the village country lane is found only in this character area. Of all the road types the mews/courtyards and park frontage street are the most prevalent. Both road types appear 5 times although the park frontage street is the only road type to appear in all 3 residential character areas.

The fact that the road hierarchies are used in different concentrations in the 3 residential zones will arguably result in some variation at least between the zones themselves. In addition, the High Street has 4 sub zones A-C (Figure 3) which will ensure differentiation and legibility throughout this major arterial route. Whilst in a practical sense 7 road hierarchies is a large number to work with and a smaller number of road hierarchies could arguably achieve the same results. It is argued here that this changing character and dispersed settlement pattern away from the central core of the site will result in inter zonal variation and this aspect is not contested. It is articulated in the Design Code thus:

> '*The differentiation of density, building typologies, and block design across the site will give rise to a series of character area types across the development*' (EDAW (2004), p12).

What forms the focus for this study is the intra-zonal variation, in short is there scope for surprise and excitement caused by an unexpected variance within a specific neighbourhood which is subject to the same design code parameters (to assess whether the code has a negative impact on innovation or design creativity). Those controlling mechanisms that are embodied within the specific design codes for the road types will now be examined to see if they allow for innovation or design creativity.

4.3: Mechanisms Embodied in the Code to Secure Innovation or Design Creativity:

Table 2 highlights the key controlling features contained within the code to secure both continuity and differentiation between housing types and between the road types.

						architectural detailing (p22)
minimum of 30 on western area eastern area to be developed at approximately 40 DPH						Precise density requirements only given for High Street and no minimum stated for eastern area. Also density organised independently from either road hierarchies or character areas. Is maximum limit needed?
	-	-	-	-	-	
	-	-	-	-	-	
nd principal the street	main entrance and principal rooms facing the street	main entrance and principal rooms facing the street	main entrance and principal rooms facing the street	main entrance and principal rooms facing the street	main entrance and principal rooms facing the street	The intention is clear but simply having the main access onto the street does not guarantee that this will be used as the primary access. Definition of principal room?
line to be e same	-	-	-	-	-	Some guidance given with evidence that flexibility of design incorporated. Guidance only given for some road types though.
permitted tep forward de	-	-	-	-	-	
et frontage generally ar the High continuous vest	generally continuous with some openings permitted and mix of dwelling types	generally continuous with some openings permitted	-	Not continuous	generally continuous with some openings permitted and mix of dwellings types and roof heights	Terms used are very vague 'generally' continuous? Implies breaks in built frontage acceptable even on High Street. For the Park Frontage Street where is 'near' the High Street?
Minimum 20 Meters						
exibility in applying the 20m distance to take into account issues of privacy/overlooking/overshadowing etc						
rallel kerb ential side of nly	Parallel kerb parking - Formally arranged	designated parallel kerb parking formally arranged on both sides of the street	Designated bays either parallel or perpendicular to irregular building line	On carriageway variable kerb with parking either side of street	Parallel kerb parking on one side of street only - formally arranged	
ged	Permitted	Permitted	Permitted	Permitted	Permitted	These details are desirable for the park frontage street but the fact that they are 'encouraged' rather than required could result in their omission altogether. Equally on the High Street porches may interrupt the building line but are permitted - very vague guidance
ged	Permitted	Permitted	Permitted	Permitted	Permitted	
ged	Permitted	Permitted	Permitted	Permitted	Permitted	
but or front mews will s at ground er levels	Gables which abut or front the streets and mews will provide windows at ground and **all** upper levels	Gables which abut or front the streets and mews will provide windows at ground and **all** upper levels	Gables which abut or front the streets and mews will provide windows at ground and **all** upper levels	Gables which abut or front the streets and mews will provide windows at ground and **all** upper levels	Gables which abut or front the streets and mews will provide windows at ground and **all** upper levels	Minor difference between wording of requirements for High Street and all other roads seems strange - particularly as the highest buildings will be on the High Street itself - unclear why differentiation needed

e 40 - 50 sqm						incorporated although it may not be desirable it is not controlled.
itted?	Permitted	Permitted	-	Permitted?	Permitted?	
itted?	Permitted	Permitted	-	Permitted?	Permitted?	
	Linear lengths of one dwellingtype will be terminated with a highlight					Evidence that design variation is incorporated into the code with some flexibility given to the designer
	od of achieving highlight flexible ie localised increase in building height, architectural detail or punctuated roof line					

4.3.1: The Key Controlling Mechanisms:

In analysing the content of the code from Table 2 one of the key aspects evident is that there are a variety of controlling mechanisms utilised within the design code including building height, density, street characteristics, cosmetic detailing (ie porches, balconies etc) and dwelling types. In analysing the degree of flexibility within the code to facilitate innovation or design creativity, building heights will be examined in more detail to illustrate the issues (see Table 2).

4.3.2: The Vaguest of Terms:

In a more general sense the vague terminology used within the code is revealing. A key example of this is the terminology used to describe the built frontage under the street characteristics section (Table 2). In six out of the seven road types the word 'generally' appears in the description of the character of the built frontage. The word generally is vague indeed and it could be argued that this offers a deal of flexibility to the designers to incorporate and vary the distance of breaks in the built frontage and in one sense this is the case. However, there are a number of factors that have a potentially negative outcome. Firstly, bearing in mind that the developer is a volume house builder with commercial interests driving the project, it is unlikely that large gaps will be incorporated unless demanded by the code, in order to ensure that the amount of developable land (and profit) is maximised. The implication here is that frontages could be continuous where a more open grain was intended. Conversely, the code implies that breaks in the built frontage of the High Street are acceptable (at least it is not directly stated that it isn't permissible). Whilst in the light of the preceding statement this is likely to be 'self policing' there is the theoretical potential at least for the continuity and vitality of the High Street to be compromised and undermined by breaks (and potentially large breaks as no definition of 'generally' is given) in the active frontage. This is just one of example of the use of the word 'generally' – it is also used in respect of building heights and in describing the form of semi-detached dwellings (See Table 2). Moreover there are a number of

equally vague terms used within the code. This illustration of the use of the word 'generally' and its implications is sufficient to clearly demonstrate the paradoxical nature of the code. That is that there is potential for innovation on the one hand (an unexpected break could be incorporated due to fluidity of term) whilst at the same time it allows the commercial realities of the aims of volume house builders to be accommodated. Arguably this will result in variation without surprise.

4.3.3: Controls at a Variety of Resolution Levels:

In conducting the content analysis of the design code another aspect that reveals itself as problematic is that there are a range of controls operating at different resolution levels within the site. For instance there is the road hierarchy established through seven road types, there are three residential character areas which all have various permutations of these road types. Some of the controlling mechanisms operate at the scale of the road type – for instance factors such as built frontage requirements (however vague - see discussion above) will operate at this scale. Housing density is controlled at 2 scales with only precise requirement stated for the High Street area and then controlled only by an 'east - west' divide across the site. This east-west boundary does not correspond to any other demarcation and straddles both road hierarchies and character areas within the site. Other factors are controlled at a very fine resolution level, at the scale of the street such as linear lengths of one dwelling type and even finer than this at the individual dwelling – factors such as porches, bays and balconies are controlled at this level (see Table 2). Whilst it is accepted that it is neither practical or desirable to control all factors at one scale, the absence of consistent boundaries at various scales i.e dwelling, street, character area, could lead to confusion in interpreting the code and result in problems in transcending from one scale to another. It has certainly presented problems in analysing the content of the design code and on this basis it can be reasonably assumed that it is likely to create similar problems at the implementation stage.

4.4: Where and How are Creativity and Innovation Referred to?

The design code explicitly states that *'it inspires innovation'* (EDAW, (2004), p6). However, this statement is not expanded or supported with any illustration as to how innovation will be fostered or achieved. Moreover, this is the only direct reference to the term innovation to be found within the code.

Consequently other terms must be used as a 'proxy' for creativity and innovation. The word 'flexibility' (EDAW (2004) p14) is used within the code and at first glance it may appear that this offers some scope for design creativity. However, the term is used in connection with the High Street Zone and is used to ensure that ground floor spaces will lend themselves readily for conversion from residential to commercial uses as the demand for services increases (Sections 3.3 & 3.4 p14 Ashford Barracks Design Code (2004)). Consequently the code focuses on those structural elements required to facilitate commercial/retail uses including floor heights (minimum requirements), emergency exit arrangements, large windows, capped services and facades at ground floor level that can be easily dismantled independently of the upper floors. It appears that what is occurring is securing the flexibility of future uses via a rigid set of physical requirements. The word flexibility in this context has no direct relevance to securing design innovation and creativity. The term flexibility again appears in the context of applying the minimum 20m back-to-back distances between blocks (EDAW (2004), p27). Given the 'flexibility' caveat It is unclear if the 20m requirement is actually a 'rule' or guidance (see definition of design codes p3. It is clear however, that flexibility in this context is chiefly concerned with the practical implementation of the 20m minimum requirement, as it is based around residential amenity issues as opposed to directly securing innovation or design creativity, although it is acknowledged that this could be an indirect outcome.

The word variety is also used in the code (p16) which in terms of a proxy measure hints at the possibility to allow design creativity and innovation. In this case variety is used in the context of building heights:

> *'A variety of building heights coupled with the range of dwelling types and densities ensures that a rich urban form will be created at Ashford Barracks'* (EDAW, (2004), p16).

In contrast to the previous reference to flexibility the term variety does appear to give freedom to the designer to create variation. However, the distinction between surprise and excitement and variation is very stark indeed. Whilst it is clear that an innovative response to this caveat is not precluded, it could be argued that given the fact that 'in general' houses will be 2-3 storeys (see table 2 and preceding discussion) the resultant variation in heights will be a self controlling mechanism even with the permitted variation resulting in differences that are not too great. Thus the likelihood of innovation or design creativity is reduced with a consequent reduction in the key elements of surprise – the 'unexpected or sudden encounter' (see P20) and the 'unexpected variance' (see p21). This is not necessarily a criticism of the code, particularly as one of the aims of the code is to create a coherent environment. In this sense one of the key findings is that the code whilst not precluding innovation, at the same time it does not demand it. It is argued here that there is evidence that the code is likely to foster variation without surprise (as outlined above).

4.5: Reviewing the Designs.

It is relevant to review designs created within the boundaries set by the design code because if evidence of innovation or design creativity could be demonstrated this would be one of the most compelling findings to bolster the underlying assumptions and support the hypothesis that underpins this research. Building on the content analysis of the design code it appears that there is scope for variation and this is not questioned, rather the aim of this

element of the research is to demonstrate the existence of innovation or design creativity in existing designs. This review must be linked back to the research terminology and so an unexpected or sudden variance in the housing designs is sought as evidence to indicate innovation or design creativity (see definition on page 21).

Figures 6 – 8 show three different responses to the Urban Formal Street design code criteria from three different designers. All designs are deemed to comply with the code. In looking at these designs there are a number of key similarities, all have continuous street frontages (although some gaps are permitted by the code). The notion that although breaks in frontage are permitted these would be omitted in practice due to the aims and aspirations of the house builders as outlined in section 4.3.2 seems to be reinforced in practice by these drawings. In terms of the actual designs it can be readily seen that there is evidence of variety both between the different responses and within each individual street scene. It can also be seen that the code is 'style neutral' both contemporary and more traditional designs can comply and so there is no restriction here. Some of the elements identified in the content analysis as providing opportunity for flexibility in design decisions are in evidence – the Juliet balconies and punctuated roof line are utilised in the Llewelyn Davies response. Canopy porches and variations in roof height are also evident in the developer's response. It is maintained that although there is undoubtedly evidence of variation, there is nothing here that would fit the research criteria of an unexpected or sudden variance giving rise to surprise. The key finding must therefore be that the code fosters variation without surprise. That is not to say that innovation is precluded as these illustrative designs are not exhaustive but certainly in practical terms this is the likely outcome.

Figure 6: Urban Formal Street submitted on behalf of the Developer. Verbal permission to reproduce this image given by Barton Willmore Architects (Reading Branch on 27 May 2005)

Figure 7: Urban Formal Street Taken from Ashford Barracks Design Code.

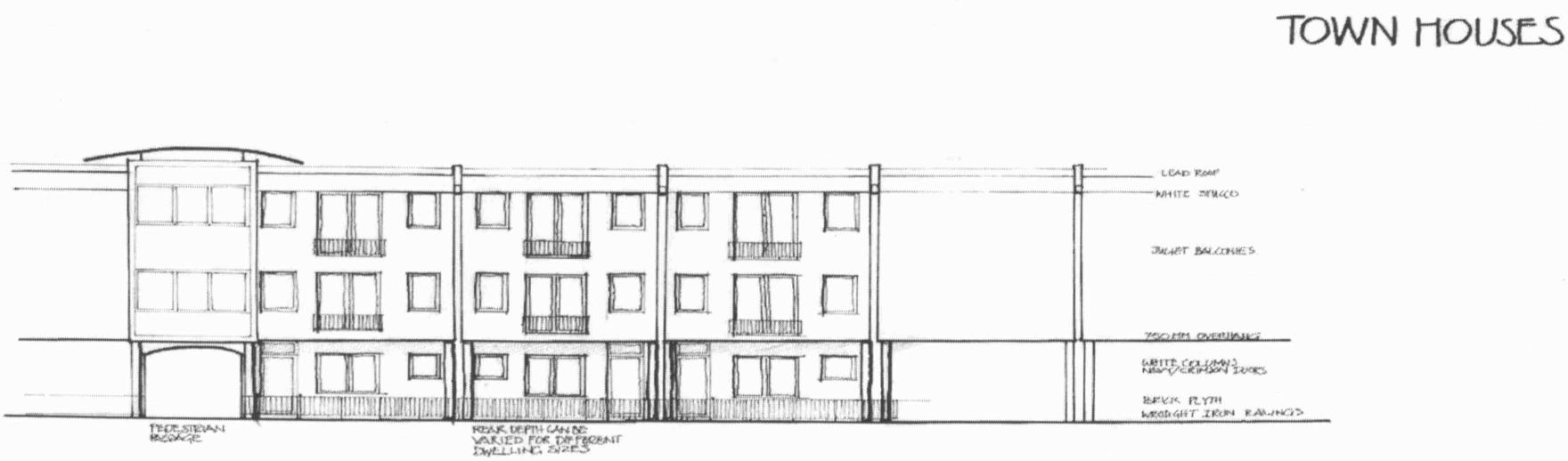


Figure 8: Urban Formal Street produced by Llewelyn Davies Architects.

4.6: Semi-Structured Interviews.

The semi-structured interviews were pivotal in establishing an overwhelming consensus on 2 key issues, namely the research terminology and whether design codes would stifle innovation or design creativity – the cusp of this research. It was decided to focus on this latter element as the review of the designs had failed to unequivocally demonstrate that innovative designs existed that complied with the design code. This left the central issue rather elusive and so 'expert' views on this were sought to probe the matter further. Whilst other issues were explored and discussions centred around the role that design codes could or should play raised particularly interesting questions there is simply insufficient scope to expand the discussion further.

4.6.1: Surprise and Excitement.

Firstly with regard to the research terminology it was found that in response to the content of Figure 2 all interviewee's agreed that surprise was a positive and essential element in the built environment. Whilst two agreed that excitement was a positive and relevant term they went on to articulate examples of 'surprise' whilst one directly stated that excitement would be likely to be restricted to those involved in the built environment professions. This demonstrates an overwhelming consensus on the relevance of the terms used with excitement being perceived either directly or indirectly as less useful to the research. The following extracts from the transcripts of the interviews highlight this:

Interviewee 1: Urban Designer employed by the Local Planning Authority.

> **Interviewer:** Could you look at these scales and tell me whether you think surprise and excitement are negative or positive terms? (Interviewee shown Figure 2)

Respondent: yes – this is interesting, I think both elements are positive if they are achieved correctly

Interviewer: Do you consider that 'surprise' and 'excitement' are important in the built environment?

Respondent: Yes – they are really important and must be in the right place. Good design is more important in general terms and if there is too much surprise then you will be left with an incoherent place. In a sense what should be achieved is engineered surprise – what I mean by this is something drastically different in the right place but not too much surprise in the rest of the development. Do you see what I mean? There has to be a sense of coherence to accentuate the surprise when it comes.

Interviewee 2: Senior Planner employed by the Local Planning Authority.

Interviewer: do you think surprise and excitement is a negative or positive element in the context of the built environment? (interviewee shown Figure 2)

Respondent: - yes I would say that surprise should be neutral or maybe a mildly positive reaction and excitement should be positive

Interviewer: can you tell me if you think surprise and excitement are important in the built environment?

Respondent: - yes these elements are very, very important – particularly surprise. I think 90% of the buildings should be interesting but essentially background, non-offensive buildings. 10 % should be focal buildings or landscapes at a focal point, a point where people would naturally gather such as a pinch point or civic building. To me the negative surprise on your scale – what was the word? That's it 'error' would be an iconic building in the wrong place – it's easily done.

Interviewee 3: Architect working in Private Practice.

Interviewer: I'd like to start by just asking you a general question about whether you think surprise and excitement in the context of the built environment are positive or negative terms (interviewee shown Figure 2).

Respondent: Well I think surprise is positive and a good word to use but I'm not sure about excitement.

Interviewer: Why not?

Respondent: I think to a non-specialised audience you would get surprise as a reaction quite often – I'm just not sure that people, generally get very excited about buildings – obviously people in the profession do – but that's why people think we are strange and sad!

Interviewer: Ok but do you think surprise and excitement are necessary elements in, and reactions to the built environment?

Respondent: Yes – well surprise is what you would aim for with a key building I guess. Excitement would be the professional's response in my view but it would have to be a very special building to achieve this. I think surprise is a much more realistic reaction, I'd be happy with that.

4.6.2: Do Design Codes stifle Innovation or Design Creativity?

Given that this is the fundamental research question it was considered appropriate to pose this question directly to each of the interviewee's.

Interviewee 1: Urban Designer employed by the Local Planning Authority.

Interviewer; Do you think that design codes will stifle innovation or design creativity?

Respondent: No, in reality there isn't a lot of design innovation at grass roots level. The reality is that volume house builders will always want standard house types and codes should ensure that the detailing at least is good. I think with the Barracks design code its style neutral and so the fundamental design is not prescriptive – ultimately it will depend on the quality of the designer that interprets the code.

Interviewee 2: Senior Planner employed by the Local Planning Authority.

Interviewer: so what do you think the role of a design code is then?

Respondent: A code should be basic guidelines without stifling creativity.

Interviewer: So do you think design codes do stifle creativity?

Respondent: No – for something to be stifled it would have to be there in the first place and it just isn't. Even with a design code you can get the mediocre designs or standard house types slightly modified to meet the requirements of the code.

Interviewer: How do you think this could be changed?

Respondent: Well ideally there would be an approved list of architects or designers – people that you know have good skills and that you can trust and enter the true spirit of the code. Then codes could be flexible, fluid documents and you would get some flair and innovation. But realistically this just isn't possible – we can't insist on this.

Interviewer: So what's the reality then?

Respondent: The reality is that design codes provide consistency across the whole site – a sort of benchmark so that as the site is sold off to different developers there is some consistency in the way it's developed.

Interviewee 3: Architect working in Private Practice.

Interviewer: There have been commentators who have argued that design codes will stifle innovation and design creativity – do you think this is the case?

Respondent: well who said that?

Interviewer: George Ferguson the RIBA president.

Respondent: Well I think he's missing the point quite frankly.

Interviewer: In what way is he missing the point?

Respondent: The point is that you have to distinguish between the few top end schemes that will be exemplary in design innovation and creativity and the rest. There will always be the Millennium village and the bedZ kind of developments and these are in a league of their own in terms of design innovation and creativity – to my mind they are 'above' coding as they are driven by either a landowner or a key underpinning ethos such as sustainability. They will have architects and designers involved who are able to design with flair and creativity because the scheme is something special to start with. With coding we are talking about a different animal altogether it's aimed at volume house builders. Volume house builders are commercial animals end of story and they will want to expend as little as possible in order to make as much as possible – that's the basic principle of how they operate. Now if any designers of the calibre normally involved in innovative schemes worked with volume house builders to my mind they should

be educating them as to the whole ethos of coding, improving quality of design and showing them that good design can add value. And a designer of good calibre will look at a code and not be restricted by it – its kind of a mechanism to raise the bottom bar but an innovative designer will not be stifled by it – I think its just unlikely that you will get a truly innovative designer working on a design coded scheme or if they do then they will be tempered by the developers aspirations. Volume house builders don't currently innovate, or won't until it makes them money – simple as that.

What is revealing here in my view is that the consensus is threefold. Firstly that there is an existing lack of innovation, secondly that design codes will not stifle innovation and thirdly that the nature of the house builders involved in the scheme is critical to the lack of innovation. The clear finding here is that although design codes are not perceived to have a negative impact on innovation or design creativity there is also an acceptance or at least a sense of resigned awareness of the fact that in reality at least codes cannot secure it either. Moreover, these assumptions can be transposed to other scenarios and are not specific to the Ashford experience – giving this increased significance as a key finding.

4.7: Summary of Key Findings.

- Variation between the 3 residential character areas will be achieved at the Barracks site
- Innovation whilst not precluded by the design code is not actively secured either
- Innovation and design creativity may occur as indirect results of the code but it is not an explicit aim of the code
- It appears that there is a dichotomy emerging in that there will be a difference between the theoretical/academic findings that whilst there IS the potential for innovation the reality may be that the designs

submitted to comply with the code may not demonstrate evidence of innovation or design creativity

- The likely outcome in practical terms is variation without surprise

Part Five: Weaknesses and Limitations of the Research.

Prior to drawing conclusions from the research findings it is essential to outline the weaknesses and limitations of the research. As with any short piece of research work, this research has by necessity been particularly focused in its scope. Whilst the case study approach is appropriate, the nature of design codes is such that they will vary enormously from site to site and so not all of the findings of this research may readily transpose to other situations or sites (although some broad principles may).

5.1: Terminology.

There is the issue of precise terminology. Whilst every endeavour has been made to clearly define the research terms, when analysing the Barracks Design Code for content and reference to innovation and creativity it was found that these exact words appeared only in passing and with rather vague implications (see section 4.3). Consequently, in the absence of a direct reference to creativity and innovation it was necessary to adopt 'proxy' measures for these terms. This need had not been foreseen and highlights a clear weakness within the methodology. The result is that the search for creativity and innovation – using the research terminology 'surprise' and 'excitement' identified from the literature has been substituted with 'flexibility' and 'variation' – the terms used in the design code. Obviously the terms are not directly interchangeable and do not unequivocally correspond. What this demonstrates is the elusiveness of the terms innovation and creativity, whilst everyone will know when it is present – identifying the potential for it within a design code is more challenging.

5.2: Which Factors to Analyse?

With regard to the content analysis, this was problematic due to the scope of the code and difficulty was encountered in determining which factors to include in the analysis. Many factors such as boundary treatments, parking arrangements and privacy strips will have a bearing on the overall visual

appearance of the residential areas whilst not being strictly 'residential' features. Consequently the matrix used to analyse the content of the code (Table 2) does have limitations. Ultimately some elements have to be excluded from the analysis as the scope is simply too broad. Whilst the research was centred on housing design, the High Street includes housing and mixed-use aspects – given that this is a specialised and complex situation and not exclusively residential. With hindsight it may have been preferable to omit it from the analysis for the sake of clarity. It was also found that some of the interviewees felt that surprise and excitement were to be reserved for civic or landmark buildings and in this sense it could be argued that the research is looking in the wrong place for innovation and design creativity in housing design.

5.3: The Wider Issues.

In addition, the complexity of the issues surrounding design coding cannot be overstated. Factors such as land ownership, the developers aims, the design team, political pressures and the quality of the design code itself can all have an enormous bearing on the outcome of a design coded development. Although every attempt has been made to disentangle design codes and assess whether they stifle design creativity and innovation, it should be borne in mind that a series of complex and interrelated issues and a variety of players all inevitably shape the process and the outcomes.

5.4: The Challenge of a Rapidly Evolving Subject Area.

Finally, some of the designs utilised in the analysis of design creativity were received very recently and were rather hastily added to the analysis, with a resultant superficiality. However, design codes are evolving so rapidly and ultimately their success can only be measured on the basis of the designs received. Consequently it was considered essential to include the timeliest information available even if this did compromise the depth of the analysis to some extent. It was particularly pertinent to include the most recent designs

as they represent the developer's response to the design code, an aspect which had previously been lacking.

Whilst these limitations should be borne in mind when assessing the conclusions this does not render the research invalid or irrelevant as the methodology retains its robustness through the triangulation of research and varied research methods. Consequently the findings and conclusions will still add to the body of knowledge concerning design codes and their potentially limiting effect on design creativity and innovation.

Part Six: Conclusions:

6.1: Does the Evidence Support the Hypothesis?

From the research findings it is rather inconclusive as to whether design codes have a negative impact on innovation or design creativity and this arguably must be the initial conclusion.

From the content analysis it must be concluded that there is at least some scope for flexibility in design decisions and consequently some freedom at least is given to the designers. The interviews reveal unanimously and clearly that design codes are not perceived to stifle design creativity or innovation and yet the designs examined do not reveal any innovation or creativity that would warrant the reactions of surprise and excitement that form the basis of this research. Although absence of evidence does not constitute evidence of absence there is something that remains elusive in enabling firm conclusions to be drawn from the findings.

6.2: A Two-Fold Conclusion:

In order to give the final conclusions more clarity I consider that it is necessary to draw the distinction between the theoretical potential for innovation and design creativity in response to the Barracks Design Code and the likely outcomes in practice. The basis for this distinction being made is that the outcome of the content analysis revealed no evidence of innovation or design creativity being stifled – in theory at least. The interviews revealed that there was certainly no perception that there was any negative impact on innovation or design creativity arising from design codes. However, the actual designs produced as a response to the code showed no evidence of innovation or design creativity. This seems to reveal a tension in the findings and this dichotomy would point to there being a sharp division between theory and practice with far reaching implications for the resultant conclusions that can be drawn.

6.2.1: A Theoretical Conclusion:

The preceding chapters demonstrate that the Barracks Design Code shows evidence of flexibility with potential for design innovation and creativity to be exercised by those charged with interpreting the code. The perceptions of all experts interviewed unanimously revealed that the design code is not perceived as a limiting document in design terms. In the case of the Barracks Design Code it was forcefully argued in the interviews that house builders were not currently innovating in design creativity. On this basis alone (that an element that is lacking cannot be stifled) the conclusion must be that design codes have no negative impact on innovation or design creativity. To further bolster this, is the fact that although the designs reviewed for this analysis do not demonstrate evidence of innovation or design creativity these designs are not exhaustive. Consequently the absence of evidence cannot be argued as sufficient to prove evidence of absence in this case. Moreover, the lack of innovation and design creativity in those designs reviewed cannot be directly linked to the requirements of the code. Consequently the evidence would seem to support the Hypothesis and it must be logically concluded that at a theoretical level design codes have no negative impact on innovation or design creativity.

6.2.2: A Practical Conclusion:

Although at a theoretical level there is no evidence of any design codes having any negative impact on innovation or design creativity, in practical terms, the outcomes are likely to reflect differently. Whilst not stifling innovation or design creativity, codes are also unlikely to actively secure and demand innovation and design creativity. The practical conclusion must therefore be that design codes are unlikely to foster or demand innovation or design creativity and so it may appear that they are ineffective in this regard. At the most basic level this means that volume house builders are likely to be able to 'standardise' house types that comply with the relevant design code development. Certainly based on the Ashford experience of the design codes this is at least being attempted and may be impossible to resist provided the

'standard' house types that comply with the code. In this sense the most far reaching practical conclusion has to be that a code is ultimately only as good as the person who interprets it and a critical factor in this will be the developer involved.

6.3: Summary of Key Conclusions:

- At a theoretical level design codes have no negative impact on innovation or design creativity
- Design codes cannot ensure innovation or design creativity at a practical level
- Variation without 'surprise' is a likely outcome in practical terms
- Overall the quality of a design coded development is likely to be higher than that of a non-coded development, but this will not necessarily be demonstrated through innovation and design creativity.

6.4: A Design Issue for Further Investigation?

In the light of the practical conclusions outlined above it is maintained here that an interesting research topic to test the findings of this research would be to compare the design outcomes from a single volume house builder in response to different design codes to assess the extent of standardisation occurring and assess whether this has any negative impacts on the design outcomes.

6.5: Broader Topics for Further Investigation?

Notwithstanding that the focus for this research has been centred around innovation and design creativity, from the research (particularly the interviews) some very clear issues were raised and cannot be fully explored here due to limitations of time and space. However, their worth as possible future study areas are briefly acknowledged:

- Design Codes are perceived as a safety net to mitigate against the worst rather than securing the best – how can this be challenged? Should it be challenged?
- Format of many is codes currently poor – too long and too 'wordy' or unclear – how could the format be improved?
- How can the robustness of initial masterplanning be ensured – what went wrong at the Barracks Site?

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Lisa Bower

From: Rachel Jones [R.Jones@ldavies.com]
Sent: 23 May 2005 14:02
To: Lisa Bower
Subject: RE: Ashford Barracks - Workshop 2 - 11 August 2004

Using the illustrations in your dissertation won't be a problem at all

If you require further information please call

Kind Regards

Rachel Jones
020 7612 9471

-----Original Message-----
From: Lisa Bower [mailto:LISA.BOWER@ashford.gov.uk]
Sent: 23 May 2005 14:00
To: Rachel Jones
Subject: Ashford Barracks - Workshop 2 - 11 August 2004

Rachel,

Thank you for e-mailing me over above mentioned presentation - its a really useful document.

I'm currently looking at design codes for my MSc Dissertation and if at all possible I'd like to reproduce some of the indicative sketches contained in the document. Although the work was undertaken on behalf of Ashford Borough Council - obviously we do not 'own' the designs and I was wondering whether I could have permission from Llewelyn Davies to reproduce the designs within my dissertation. I will of course fully reference the work to Llewelyn Davies.

Would it be possible if you could advise me if this would be acceptable to you? Alternatively if you would like to discuss this with me then please feel free to telephone me on 07879 686521.

Regards

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